

## **REMARKS/ARGUMENTS**

Reconsideration and withdrawal of the rejections and objections of this application are respectfully requested in view of the amendments and remarks herein, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

### **I. STATUS OF THE CLAIMS AND FORMAL MATTERS**

Claims 1, 2, 4,5, 7,8, 10, 11, 13, 14, 16 and 17, which are currently pending, are hereby amended. Claims 1, 4, 7, 10, 13, and 16 are independent. Claims 3, 6, 9, 12, 15, and 18 are hereby canceled, without prejudice or disclaimer of subject matter.

The present Amendment obviates the objection to the claims.

No new matter has been introduced into the Application by this Amendment. Support for this amendment is provided throughout the Specification as originally filed, and specifically at pages 4, 11 and 14 and Figure 4.

Changes to claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

### **II. OBJECTIONS TO THE SPECIFICATION**

The Specification was objected to because equation 4 allegedly introduced new matter. Applicants respectfully submit that the equation is corrected due to typographical errors and is not new matter. Applicants amended Equation 4 to the standard Hamming function definition. The Examiner is directed to the well-known signal processing textbook by A.V.

Oppenheim and R.W. Schafer, *Discrete-Time Signal Processing*, published by Prentice-Hall in 1989 (pages 447-448) for the expression of the standard Hamming function equation. One of ordinary skill in the art would be very familiar with the standard Hamming function expression.

In addition, the Examiner is directed to the website

<http://www.mathworks.com/access/helpdesk/help/toolbox/signal/hamming.html> for another disclosure of the well-known Hamming function expression. Finally, if the Examiner is still unconvinced, he is directed to the website

<http://www.lohninger.com/helpsuite/weightingwindow.htm> for an expression of the Hamming function that matches original Equation (4).

Equation 10 on page 26 has been presented in larger font, thereby obviating the objection.

In light of the present Amendment and for all the reasons stated above, Applicants respectfully request that the objections to the Specification be withdrawn.

### **III. REJECTIONS UNDER 35 U.S.C. §101 and §112**

Claims 7, 8, 16 and 17 have been amended, thereby obviating the 101 issue.

Claims 1, 4 and 7 have been amended, thereby obviating the 112 issue.

### **IV. REJECTIONS UNDER 35 U.S.C. §103(a)**

Claims 1-2, 4-5, 7-8, 10-11, 13-14, and 16-17 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 6,360,198 to Imai et al. (hereinafter, merely "Imai") in view of U.S. Published Patent Application No. 2002/0138256 to Thyssen (hereinafter, merely "Thyssen").

Claim 1 recites, *inter alia*:

“...a plurality of steps of calculating self correlation coefficients, based on each piece of the cut-out parts of the digital audio signal;

wherein a first step of calculating self correlation coefficients uses fewer samples than a second step of calculating self correlation coefficients.” (Emphasis added)

As understood by Applicants, Imai relates to an audio processing method capable of outputting voice having regular pitch regardless of reproduction speed. An audio processing method of, when reproducing, at a reproduction speed different from that at which an audio signal have been recorded in a recording medium, the audio signal on the recording medium, adjusting the pitch of the reproduced audio signal.

As understood by Applicants, Thyssen relates to a multi-rate speech codec that supports a plurality of encoding bit rate modes by adaptively selecting encoding bit rate modes to match communication channel restrictions. The encoder generates pluralities of code-vectors from a single, normalized code-vector by shifting or other rearrangement. As a result, searching speeds are enhanced, and the physical size of a codebook built from such code-vectors is greatly reduced.

Applicants respectfully submit that nothing has been found in Imai or Thyssen, taken alone or in combination, which would teach or suggest the above-identified features of claim 1. Specifically, neither Imai nor Thyssen, taken alone or in combination, disclose or suggest, a first step of calculating self correlation coefficients uses fewer samples than a second step of calculating self correlation coefficients, as recited in claim 1.

Additionally, Applicants respectfully reiterate the arguments in the previous response that there is no motivation, suggested or implied, within either Imai, Thyssen, such that one of ordinary skill in the art would combine the reference teachings.

For all the reasons stated above, Applicants respectfully submit that claim 1 is patentable.

For reasons similar to, or somewhat similar to, those described above with regard to independent claim 1, independent claims 4, 7, 10, 13, and 16 are also patentable.

## **V. DEPENDENT CLAIMS**

The other claims are each dependent from one of the independent claims, discussed above, and are therefore patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

## **CONCLUSION**


In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited references, it is respectfully requested that the Examiner specifically indicate those portions of the reference, or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are in condition for allowance and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

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